



# **OUTPATIENT PHARMACY (OP)**

## **TECHNICAL MANUAL/SECURITY GUIDE**

Version 7.0  
December 1997

(Revised April 2003)



## Revision History

The table below lists changes made since the initial release of this manual. Use the Change Pages document to update an existing manual or use the entire updated manual.

**Note:** The Change Pages document may include unedited pages needed for two-sided copying. Only edited pages display the patch number and revision date in the page footer.

Date	Revised Pages	Patch Number	Description
04/2003	Title, i-ii, iv, 3, 5-6, 13-14, 45-48f 71-74	PSO*7*120	Updated Title Page, Revision History Page, Table of Contents, and Index. Added new information related to the Laser Printed Prescription Labels with PMI Sheets enhancement, including label printer support, routines, and sample control code entries.
02/2003	i; 5; 11; 37; 42 - 43	PSO*7*116	Updated Revision History. Added PRESCRIPTION REFILL REQUEST file (#52.43) to the Outpatient Pharmacy File List (Section 4.1) and to the File Security List (Section 14.7). Added <i>Process Internet Refills</i> option to <i>Outpatient Pharmacy Manager</i> menu (Section 15.1) and to <i>Pharmacist Menu</i> (Section 15.2).
12/2002	Title, i – (ii), 13 (14) (41) 42	PSO*7*127	Updated Title Page and Revision History Page. Added the new routine PSOADDR to the Routine List. Added the new <i>Patient Address Changes Report</i> option to the menu diagram.
10/2002	Title, i – iv, 63-72	PSO*7*111	Updated Title Page, Revision History Page, and Table of Contents pages. Added Appendix B for the new HL7 Messaging with an External System. Included Index due to the page numbers changing. Included pages for double-sided copying.
02/2002	i,(ii.) 41-(42)	PSO*7*97	Reissued corrected pages for document released with medication copay patch PSO*7*71 and PSO*7*80. Updated Revision History. Corrected page numbering error in footer.

Revision History

Date	Revised Pages	Patch Number	Description
11/2001	i (ii), 1 (2), 3 (4), 13 (14), 15 (16), 29 (30), (35) 36, 39 (40), 41 (42)	PSO*7*71  PSO*7*80	Added changes related to OP Medication Copay/MillBill. p. i. Updated Revision History page. p. 1. Introduction section revised. p. 3. Orientation - added Copay Release Notes to list of related manuals. p. 13. Routine List - added four new routines. p. 15. Exported Options - added new security key and description. p. 29. External Relations - updated list of other software needed. p. 36. Software Product Security - added new security key and description. p. 39. Outpatient Pharmacy Supervisor Menu Diagrams – revised Copay Menu options and (p. 41) added new Free Text Dosage Report. (Pages in parentheses were not changed but included in this Release Notes document for two-sided copying.)
09/2001	All		Complete revision. Added Revision History Page. Re-formatted entire manual to meet national and local documentation standards. Added HL7 web address to External Interfaces section. (Sec. 9) Noted that the PSOA PURGE key and Purge options under Archiving are out of order until further notice (Sec. 6.2, 7, and 14. 6). Updated contents to include changes due to previously undocumented patch releases and the Pharmacy Ordering Enhancements (POE) project patch PSO*7*46.
12/97			Original release of V. 7.0 Technical Manual.

# Table of Contents

<b>1. Introduction .....</b>	<b>1</b>
<b>2. Orientation .....</b>	<b>3</b>
2.1.    Online Documentation .....	3
2.2.    Related Manuals.....	3
<b>3. Implementation and Maintenance .....</b>	<b>5</b>
3.1.    Resource Requirements .....	5
3.2.    Options to be Deleted during Installation .....	6
3.3.    Templates to be Deleted during Installation .....	7
3.4.    Routines to be Deleted during Installation.....	7
3.5.    M Audiofax (Telephone Refill Requests).....	7
3.6.    Setting up the Bingo Board Device .....	8
3.7.    Mail Group Setup for the HL7 External Interface .....	8
3.8.    Using the Maintenance Menu .....	8
3.9.    Queue Background Jobs .....	9
<b>4. Files .....</b>	<b>11</b>
4.1.    Outpatient Pharmacy Files.....	11
<b>5. Routine List .....</b>	<b>13</b>
<b>6. Exported Options.....</b>	<b>15</b>
6.1.    Menu Assignments.....	15
6.2.    Security Keys .....	15
6.3.    Package Security.....	15
<b>7. Archiving and Purging .....</b>	<b>17</b>
7.1.    Setting up the Archive Device .....	17
<b>8. Callable Routines.....</b>	<b>19</b>
<b>9. External Interfaces .....</b>	<b>19</b>
<b>10. External Relations .....</b>	<b>29</b>
10.1.    Data Base Integration Agreements (IAs) .....	29
<b>11. Internal Relations .....</b>	<b>31</b>
<b>12. Package-Wide Variables .....</b>	<b>31</b>
<b>13. Templates .....</b>	<b>33</b>
<b>14. Software Product Security .....</b>	<b>35</b>
14.1.    Mail Group Setup for the HL7 External Interface .....	35
14.2.    Archiving/Purging.....	35
14.3.    Interfacing .....	35
14.4.    Electronic Signatures .....	35
14.5.    Menu Assignments.....	35
14.6.    Security Keys .....	36
14.7.    File Security .....	37

Table of Contents

<b>15. Outpatient Pharmacy V. 7.0 Menu Diagrams.....</b>	<b>39</b>
15.1. Outpatient Pharmacy Manager .....	39
15.2. Pharmacist Menu .....	43
15.3. Pharmacy Technician's Menu .....	44
<b>16. Routine Mapping .....</b>	<b>45</b>
<b>17. Journaling Globals .....</b>	<b>45</b>
<b>18. Barcodes and Label Printer Support.....</b>	<b>45</b>
18.1. Barcodes on Dot Matrix Printers .....	45
18.2. New Label Stock (Version 6.0 and Later Versions) – Dot Matrix Labels .....	46
18.3. Laser Label Printers .....	48
<b>Glossary .....</b>	<b>49</b>
<b>Appendix A: Outpatient Pharmacy HL7 Interface Specifications.....</b>	<b>51</b>
<b>Appendix B: HL7 Messaging with an External System .....</b>	<b>63</b>
<b>Index.....</b>	<b>71</b>

## **2. Orientation**

### **2.1 Online Documentation**

Throughout the entire OP package, enter a question mark (?) to obtain online information to assist in choosing actions at any prompt. Where examples of screen dialogs are given, user responses are shown as bolded text.

Additional information about this package is contained in help prompts and comments which are available online. Detailed information can also be obtained by using the Kernel routine XINDEX to produce detailed listings of the routines and by using the VA FileMan to generate listings of data dictionaries for the files.

The Data Dictionaries (DDs) are considered part of the online documentation for this software application. Use VA FileMan List File Attributes [DILIST] option, under the Data Dictionary Utilities [DI DDU] option, to print the DDs.

### **2.2 Related Manuals**

*Outpatient Pharmacy V. 7.0 Release Notes*

*Outpatient Pharmacy V. 7.0 User Manual (Revised September 2001)*

*Computerized Patient Record System V. 1.0 Installation Guide*

*Computerized Patient Record System V. 1.0 Set-up Guide*

*Pharmacy Ordering Enhancements (POE)Phase 2 Release Notes*

*Outpatient Medication Copay Release Notes*

*Laser Printed Prescription Labels with PMI Sheets Phase I Release Notes*

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## **3. Implementation and Maintenance**

### **3.1 Resource Requirements**

Outpatient Pharmacy V. 7.0 contains approximately 374 routines including all PSO\* routines and compiled templates, PSOX\* and APSPT\* that take up approximately 1.5MB disk space.

Response Time monitor hooks have been placed in the following routines:

Routine	Purpose
PSON52	File New Prescriptions in File #52
PSORN52	File Renewed Prescriptions in File #52
PSOR52	File Refill Prescriptions in File #52

This package requires 22 files (see “Files” section in this manual). A typical site may require the following disk space:

1 Mbyte	DRUG file (#50) (4000 entries)
3 Mbytes per month	DRUG COST file (#50.9) (800 items dispensed by 200 dispensing physicians)
150 Mbytes	PRESCRIPTION file (#52) (500,000 prescriptions)
50 Mbytes	PHARMACY PATIENT file (#55) (500,000 prescriptions)
about 1 to 2 Mbytes	routines and the other files (except for RX VERIFY file (#52.4), RX SUSPENSE file (#52.5), and PHARMACY ARCHIVE file (#52.8))
3 to 5 Mbytes of “swing space”	RX VERIFY file (#52.4), RX SUSPENSE file (#52.5), and PHARMACY ARCHIVE file (#52.8)

Outpatient Pharmacy may be expected to require about 350 Mbytes of disk space. The actual disk utilization will, of course, depend primarily on the size of the 3 large files—PRESCRIPTION file (#52), PHARMACY PATIENT file (#55) and DRUG COST file (#50.9).

The requirements for Video Display Terminals (VDTs) and printers also depend on the number of transactions Outpatient Pharmacy performs. Approximately three VDTs and one printer are needed for each 500 prescriptions (or fraction of 500) issued each day. If mail-out refills are handled separately, at least one VDT and one printer for each 500 refills are required. An additional VDT and a printer may be desired in the supervisor's office, and 1 VDT in the office of people who are assigned to consult with patients about their medication regimens.

There are no special device requirements for dot matrix labels except to print barcodes on labels. In this case, the label printer must be able to print barcodes and must be able to be set to a form length of either 4 inches or 24 lines. The section in this document on barcodes provides additional information about this function.

Laser printed labels require one or more specially configured printers. The printer must be able to print to a legal length form and must print barcodes. In addition, the printer must support Hewlett Packard's Printer Control Language (PCL) version 5 or greater.

### **3.2 Options to be Deleted during Installation**

**NOTE:** The options listed below are deleted on the initial installation of Outpatient Pharmacy V. 7.0. No options are deleted after the initial installation, up to patch PSO\*7\*46.

Option Name	Menu Text
PSO DRUG	Drug Enter/Edit
PSO DRUGMENU	Drug/Drug Interaction Functions
PSO HOLDRX	Hold Rx
PSO INTERACTION	Drug Interactions Menu
PSO INTERACTION LOCAL ADD	Enter/Edit Local Drug Interaction
PSO INTERACTION SEVERITY	Edit Drug Interaction Severity
PSO LAB MONITOR	Mark/Unmark Lab Monitor Drugs
PSO NEW	New Prescription Entry
PSO REF	Refill Prescriptions
PSO RXEDIT	Edit Prescriptions
PSO RXHOLD	Hold Features
PSO RXPAR	Partial Prescription
PSO SIGED	Medication Instruction File Add/Edit
PSO UNHOLDRX	Unhold Rx
PSO FACILITY SETUP	Enter Facility Data for Clozapine
PSO MARK DRUG	Mark Clozapine Drug
PSOL UNMARK DRUG	Unmark Clozapine Drug
PSOARCCO	Find
PSOARCHLIST	List One Patient's Archived Rxs
PSOARCIN	Tape Retrieval
PSOARCPURGE	Purge
PSOARCSV	Save

# Routine List

The following routine list for Outpatient Pharmacy appears when the new routine set is loaded. Each routine's first line contains a brief description of the routine's function. Use the *First Line Routine Print* [XU FIRST LINE PRINT] option to print a list of just the first line of each PSO\* routine.

PSO55FX2	PSO55FX3	PSOADDR	PSOAMIS	PSOAMISO	PSOAMIS1	PSOARC	PSOARCCO
PSOARCCV	PSOARCDE	PSOARCF1	PSOARCF2	PSOARCF3	PSOARCF4	PSOARCF5	PSOARCF6
PSOARCIN	PSOARCLT	PSOARCR1	PSOARCR2	PSOARCRR	PSOARCS2	PSOARCSV	PSOARCTG
PSOARCTP	PSOARX	PSOARX1	PSOAUTOC	PSOB	PSOBARV	PSOBBC	PSOBGMG1
PSOBGMG2	PSOBGMG3	PSOBGMGR	PSOBING1	PSOBINGO	PSOBKDE1	PSOBKDED	PSOBMST
PSOBRPRT	PSOBSET	PSOBSET1	PSOBUILD	PSOCAN	PSOCAN1	PSOCAN2	PSOCAN3
PSOCAN4	PSOCLDRG	PSOCLERK	PSOCLO1	PSOCLOLS	PSOCLPRE	PSOCLUS1	PSOCLUS2
PSOCLUS3	PSOCLUTL	PSOCMOP	PSOCMOPA	PSOCMOPB	PSOCMOPC	PSOCMOPR	PSOCMOPT
PSOCOPAY	PSOCOST	PSOCOSTP	PSOCOP	PSOCPA	PSOCPB	PSOCPC	PSOCPD
PSOCPDUP	PSOCPE	PSOCPIB	PSOCPTRH	PSOCPTRI	PSOCPVW	PSOCSRSL	PSOCSSL1
PSOCST	PSOCST10	PSOCST11	PSOCST12	PSOCST2	PSOCST3	PSOCST4	PSOCST5
PSOCST53	PSOCST6	PSOCST7	PSOCST8	PSOCST9	PSOCSTAR	PSOCSTD	PSOCSTM
PSOCSTX	PSODACT	PSODEA	PSODEDT	PSODELI	PSODEM	PSODGAL	PSODGDG1
PSODGDG2	PSODGDGI	PSODIR	PSODIR1	PSODIR2	PSODIR3	PSODIRPT	PSODISP
PSODISP1	PSODISP2	PSODISP3	PSODISPS	PSODIV	PSODLKP	PSODP	PSODRDU1
PSODRDU2	PSODRDUP	PSODRG	PSODRUG	PSODSPL	PSODSRC	PSODUE	PSOELPS2
PSOELPST	PSOEXBCH	PSOEXDT	PSOEXREF	PSOEXRST	PSOFSIG	PSOFTDR	PSOFUNC
PSOHCPRS	PSOHCSSUM	PSOHELP	PSOHELP1	PSOHELP2	PSOHELP3	PSOHELP4	PSOHLHD
PSOHLDC	PSOHLLEXC	PSOHLEXP	PSOHLINC	PSOHLINL	PSOHLNE1	PSOHLNE2	PSOHLNEW
PSOHLPII	PSOHLPIIS	PSOHLSG	PSOHLSG1	PSOHLSG2	PSOHLSG3	PSOHLSG4	PSOHLSG5
PSOHLSIG	PSOHLSIH	PSOHLSN	PSOHLSN1	PSOHLNC	PSOHLUP	PSOHLUP1	PSOLAB
PSOLBL	PSOLBL1	PSOLBL2	PSOLBL3	PSOLBL4	PSOLBLD	PSOLBLD1	PSOLBLN
PSOLBLN1	PSOLBLN2	PSOLBLS	PSOLBLT	PSOLLL1	PSOLLL2	PSOLLL3	PSOLLL4
PSOLLL5	PSOLLL6	PSOLLL7	PSOLLL8	PSOLLL9	PSOLLLI	PSOLLU1	PSOLLU2
PSOLMAL	PSOLMAO	PSOLMDA	PSOLMLST	PSOLMPAT	PSOLMPF	PSOLMPI	PSOLMPO
PSOLMPO1	PSOLMPO2	PSOLMRN	PSOLMUTL	PSOLSET	PSOMAUEX	PSOMGCM1	PSOMGCOM
PSOMGM31	PSOMGMN1	PSOMGMN2	PSOMGMN3	PSOMGMN4	PSOMGMRP	PSOMGR31	PSOMGREP
PSOMGRP1	PSOMGRP2	PSOMGRP3	PSOMGRP4	PSOMLLDT	PSON52	PSONEW	PSONEW1
PSONEW2	PSONEW3	PSONEWF	PSONEWG	PSONFI	PSONGR	PSONRXN	PSONTEG
PSONTEGO	PSOORAL	PSOORAL1	PSOORAL2	PSOORAPI	PSOORCPY	PSOORDA	PSOORDER
PSOORDRG	PSOORED1	PSOORED2	PSOORED3	PSOORED4	PSOORED5	PSOORED6	PSOOREDT
PSOORFI1	PSOORFI2	PSOORFI3	PSOORFI4	PSOORFIN	PSOORNE1	PSOORNE2	PSOORNE3
PSOORNE4	PSOORNE5	PSOORNE6	PSOORNEW	PSOORNW1	PSOORNW2	PSOORRL	PSOORRL1
PSOORRNW	PSOORUT1	PSOORUT2	PSOORUT3	PSOORUTL	PSOP	PSOP1	PSOP2
PSOPAT	PSOPKIV1	PSOPOLY	PSOPOST	PSOPOST1	PSOPOST2	PSOPOST3	PSOPOST4
PSOPOST5	PSOPOST6	PSOPOST7	PSOPOST8	PSOPRA	PSOPRF	PSOPRFSS	PSOPRI
PSOPRVW	PSOPT68	PSOPT102	PSOPTPST	PSOPXRIM1	PSOR52	PSORDS	PSOREF
PSOREF0	PSOREF1	PSOREF2	PSORENW	PSORENW0	PSORENW1	PSORENW2	PSORENW3
PSORENW4	PSORESK	PSORESK1	PSORFL	PSORN52	PSORN52C	PSORPTS	PSORPTS1
PSORX1	PSORXCLE	PSORXDL	PSORXED	PSORXED1	PSORXEDT	PSORXI	PSORXL
PSORXL1	PSORXLAB	PSORXPA1	PSORXPR	PSORXPR1	PSORXRP1	PSORXRP2	PSORXRPT
PSORXVW	PSORXVW1	PSORXVW2	PSOSD	PSOSD0	PSOSD1	PSOSD2	PSOSD3
PSOSDP	PSOSIG	PSOSIGCX	PSOSIGDS	PSOSIGMX	PSOSIGNO	PSOSIGTX	PSOSITED
PSOSPSIG	PSOSTART	PSOSUBCH	PSOSUCH1	PSOSUCHG	PSOSUCLE	PSOSUDCN	PSOSUDEL

**Routine List – continued**

PSOSUDP1	PSOSUDP2	PSOSUDPR	PSOSUINV	PSOSULB1	PSOSULBL	PSOSULOG	PSOSUP
PSOSUPAT	PSOSUPOE	PSOSUPRX	PSOSURST	PSOSUSR	PSOSUTL	PSOSUTL1	PSOTRLBL
PSOUTIL	PSOUTL	PSOUTLA	PSOUTLA1	PSOVCNT	PSOVER	PSOVER1	PSOVER2
PSOVERC	PSOVRPT	PSOVWI	PSOXX	PSOXZA	PSOXZA1	PSOXZA2	PSOXZA3
PSOXZA4	PSOXZA5	PSOXZA6	PSOXZA7	PSOXZA8	PSOZACT		

## 16. Routine Mapping

No recommendations are made for routine mapping. However, to map the Outpatient Pharmacy package routines, the system will need to be brought down and then restarted to load the new routines into memory.

## 17. Journaling Globals

The primary global the Outpatient Pharmacy package uses is ^PSRX. This global is recommended if journaling is used.

## 18. Barcodes and Label Printer Support

This version of Outpatient Pharmacy includes the ability to print barcodes on the patient copy, the pharmacist's copy, and the patient narrative documents for new label stock and laser labels. Two options utilize the barcodes.

*Check Quality of Barcode* [PSO BARCODE CHECK] option is used to monitor the quality and readability of the barcode before it is mailed.

*Barcode Batch Prescription Entry* [PSO BATCH BARCODE] option is used to actually refill the prescriptions utilizing barcodes in a batch entry.

If barcodes are not used, enter an “OUT OF ORDER MESSAGE” for these two options.

### 18.1 Barcodes on Dot Matrix Printers

Three parameters are used.

X is the barcode height. Values can be "S", "M" or "L". If X is undefined or not equal to one of these, the default value of "S" is used. "S" is 2/10 inch for the DS-220 and 1/6 inch for the MT-290. "M" is 4/10 inch for the DS-200 and 1/3 inch for the MT-290. "L" is one inch for both.

X1 is the value of \$X at the left edge of the barcode. If X1 is undefined, the default value of 0 is used.

X2 is the data to be barcoded. Remember the code 39 character set that the VA uses is a limited subset of the ASCII character set containing only the numbers, uppercase letters, and eight punctuation characters. In most cases, any other characters are not printed. For example, the barcode for the string 123abc will be the same as the string 123.

On most printers, printing a barcode is a graphics operation that causes the value of \$Y to be something other than the line count from the top of the page. Forms with barcodes must use a form feed to go to the top of the next form rather than a counted number of line feeds. This is why printers used to print barcodes on outpatient pharmacy labels *must be set for a form length of 24 lines or four inches.*

The following section, New Label Stock, contains barcode on and off sequences for various printers.

## 18.2 New Label Stock (Version 6.0 and Later Versions) – Dot Matrix Labels

### \*\*\*IMPORTANT\*\*\*

Please test new label stock on all printers that will be used before going into production with new label stock.

Printers used to print the new label stock must be set to print at 12 characters per inch. The form length must be set to 5 inches.

Previously, old label stock printed barcodes in one column at 10 characters per inch. New label stock prints barcodes at 12 characters per inch in 2 columns, (columns 54 and 102). The following barcode entries in the TERMINAL TYPE file (#3.2) have worked at either the Birmingham Office of Information Field Office (OIFO) or at a site.

**NOTE:** If you cannot find barcodes that work, please contact the nearest OIFO.

Check to see that a line feed is performed after the barcode off sequence is executed. Due to limited space, information must be printed after certain barcodes print, without relying on a line feed in the Outpatient Pharmacy code. To test this, print a test label for an Rx with no refills. On the center copy of the label, on the next line after the “station number-Rx no.” which prints directly under the barcode, one of the two following lines should print clearly:

\* NO REFILLS REMAINING \*\* PHYSICIAN USE ONLY \*

or

\*\*\* This prescription CANNOT be renewed \*\*\*

If there is a problem, insert a line feed at the end of the Barcode Off sequence.  
(Add a ,! to the end of the sequence.)

Remember to set the New Label Stock site parameter to Yes.

Three site parameters provide patient instructions that will print after each patient’s prescriptions. They are “NARRATIVE NON-REFILLABLE RX”, “NARRATIVE REFILLABLE RX”, and “NARRATIVE FOR COPAY DOCUMENT”. The “NARRATIVE FOR COPAY DOCUMENT” will only print if at least one of the patient’s prescriptions is subject to a Copay charge.

**For the Data South 220**

BAR CODE ON=

```
*27,"[1w",*27,"$70s",*94,"H",$S('$D(X):"04",X="M":"04",X="S":"02",X="L":"10",1:"04"),*94,"BDB"
```

BAR CODE OFF=\*94,"G",\*27,"\$70c",\*27,"[2w",!

**For the MT-661**

BAR CODE ON=

```
*27,"[<4h",*94,$S($X<60:"T450",1:"T850"),*94,"W9;5;1",*94,"B1;35;1;3",*13
```

BAR CODE OFF=\*13,\*10,\*27,"[&lt;4l",\*27,"[5w"

The character after the [&lt;4 in the BAR CODE OFF above is a lower case L.

**For the Genicom 4440:**

BAR CODE ON=\*27,"[;3;1;;4;;4;;1;}",\*27,"[3t"

BAR CODE OFF=\*27,"[0t",!

**For the MT290:**

BAR CODE ON=\*26, "F0",\$S(''\$D(X):2,X="M":2,X="S":1,X="L":6,1:2), ";000",\*25,\*20,"\*"

BAR CODE OFF="\*",\*20,!?,?S(\$D(X1):X1,1:0),\$S(\$D(X2):X2,1:"")

or

BAR CODE ON=\*26,\*34,"F3;000",\*25,\*20,"\*"

BAR CODE OFF="\*",\*20

**For the OTC 560:**

BAR CODE ON=\*27,"[;,\$S('\$D(X):3,X="M":6,X="L":12,1:3)," } ",\*27,"[3t"

BAR CODE OFF=\*27,"[0t"

**For the Genicom 4490:**

BAR CODE ON=\*27,"[3t",\*14

BAR CODE OFF=\*15,\*27,"[0t",\*13

\*\*The setup of the MT290 will not allow for a form length of 5 inches. It skips from 4 to 5.5. Following is the terminal type information that will allow the MT290 to print the labels at a form length of 5 inches.

```

NAME: P-MANNESMANN MT290/132 (PHAR)      RIGHT MARGIN: 132
FORM FEED: #                                PAGE LENGTH: 30
BACK SPACE: $C(8)
OPEN EXECUTE: W *27, "[4W", *27, "[0Y", *27, "[30t"
10 PITCH: $C(27) "[4w"                      12 PITCH: $C(27) "[5w"
DESCRIPTION: MANNESMANN TALLY 290/132 COLUMNS
16 PITCH: $C(27) "[6w"                      DEFAULT PITCH: $C(27) "[4w"
BAR CODE OFF: "*", *20, !, ?$S($D(X1):X1,1:0), $S($D(X2):X2,1:"")
BAR CODE ON: *26, "F0", $S('$D(X):2,X="M":2,X="S":1,X="L":6,1:2), ";000",
*25,*20,"*"

```

The \*27, "[30t" was added to the Open Execute.

### 18.3 Laser Label Printers

The Outpatient Pharmacy package, with the release of PSO\*7\*120, supports the use of laser printers to print prescription labels and all associated documents.

#### 18.3.1 Hardware Setup

The printer must be physically connected to the network and then defined in the DEVICE (#3.5) and TERMINAL TYPE (#3.2) files just as any other laser printer on your network is defined.

In addition, the CONTROL CODES field (#55) of the TERMINAL TYPE file (#3.2) must be defined correctly. To facilitate this, a new routine assists with the setup. At the programmer prompt enter: D ^PSOLLU2. You will be prompted for the device. Enter the device you want to use for printing laser labels. Then, you will be prompted for HP or LexMark. Enter the appropriate selection.

**NOTE:** If you are not using either an HP or a LexMark printer, select one. Then, you may need to modify the control codes to work correctly with your printer.

#### Example Session:

```

>D ^PSOLLU2
DEVICE: HOME// FIDO PRINTERS CORNER - LINE 000      Right Margin: 132//
HP or LexMark: L
You will be copying the CONTROL CODES to device: LTA9053: are you sure?
Y Copying...

```

### 18.3.2. Sample Control Code Entries

The following are sample control code entries from one TERMINAL TYPE. Actual entries may vary depending on make and model of printer or barcode chip.

NUMBER: 1	CTRL CODE ABBREVIATION: LLI
FULL NAME: LASER LABEL INIT	
CONTROL CODE: W	
*27,"&r1F",*27,"E",*27,"&100",*27,"&u300D",*27,"&13A",*27,"&10	
E",!	
NUMBER: 2	CTRL CODE ABBREVIATION: F10
FULL NAME: TEN POINT FONT - NO BOLD	
CONTROL CODE: W *27,"(10U",*27,"(s1p10v0s0b16602X"	
NUMBER: 3	CTRL CODE ABBREVIATION: F8
FULL NAME: EIGHT POINT FONT - NO BOLD	
CONTROL CODE: W *27,"(10U",*27,"(s1p8v0s0b16602X"	
NUMBER: 4	CTRL CODE ABBREVIATION: F12
FULL NAME: TWELVE POINT FONT - NO BOLD	
CONTROL CODE: W *27,"(10U",*27,"(s1p12v0s0b16602X"	
NUMBER: 5	CTRL CODE ABBREVIATION: F9
FULL NAME: NINE POINT FONT - NO BOLD	
CONTROL CODE: W *27,"(10U",*27,"(s1p9v0s0b16602X"	
NUMBER: 6	CTRL CODE ABBREVIATION: ST
FULL NAME: START OF TEXT	
CONTROL CODE: S PSOY=PSOY+PSOYI W *27,"*p",PSOX,"x",PSOY,"y"	
NUMBER: 7	CTRL CODE ABBREVIATION: CDII
FULL NAME: CRITICAL DRUG INTERACTION INITIALIZATION	
CONTROL CODE: S PSOX=0,PSOY=1400,PSOYI=50,PSOFONT="F10"	
NUMBER: 8	CTRL CODE ABBREVIATION: PMII
FULL NAME: PMI SECTION INITIALIZATION	
CONTROL CODE: S PSOX=0,PSOY=1350,PSOYI=50,PSOFONT="F10",PSOYM=3899	
NUMBER: 9	CTRL CODE ABBREVIATION: F10B
FULL NAME: TEN POINT FONT, BOLDED	
CONTROL CODE: W *27,"(10U",*27,"(s1p10v0s3b16602X"	
NUMBER: 10	CTRL CODE ABBREVIATION: F12B
FULL NAME: 12 POINT FONT BOLDED	
CONTROL CODE: W *27,"(10U",*27,"(s1p12v0s3b16602X"	
NUMBER: 11	CTRL CODE ABBREVIATION: MLI
FULL NAME: MAILING LABEL INITIALIZATION	
CONTROL CODE: S PSOFONT="F10",PSOX=1700,PSOY=175,PSOYI=50	
NUMBER: 12	CTRL CODE ABBREVIATION: ACI
FULL NAME: ADDRESS CHANGE INITIALIZATION	
CONTROL CODE: S PSOHFONT="F12",PSOX=1210,PSOY=700,PSOFY=1270	
NUMBER: 13	CTRL CODE ABBREVIATION: ALI
FULL NAME: ALLERGY SECTION INITIALIZATION	
CONTROL CODE: S PSOFONT="F10",PSOX=0,PSOY=1350,PSOYI=50,PSOYM=2700	
NUMBER: 14	CTRL CODE ABBREVIATION: FWU
FULL NAME: FONT WITH UNDERLINE	CONTROL CODE: W *27,"&d0D"
NUMBER: 15	CTRL CODE ABBREVIATION: FDU
FULL NAME: FONT DISABLE UNDERLINE	CONTROL CODE: W *27,"&d@"
NUMBER: 16	CTRL CODE ABBREVIATION: RMI
FULL NAME: RETURN MAIL INITIALIZATION	
CONTROL CODE: S	
PSOHFONT="F8",PSOFONT="F10",PSOX=1700,PSOY=35,PSORYI=50,PSOHYI=40,PSOTFONT="F8",PSOTY=550	

## Barcodes

NUMBER: 17	CTRL CODE ABBREVIATION: SPI
FULL NAME: SUSPENSE PRINT INITIALIZATION	
CONTROL CODE: S	
PSOFONT="F10", PSOX=1210, PSOY=1350, PSOYI=50, PSOCX=1775, PSOYM=27	
00	
NUMBER: 18	CTRL CODE ABBREVIATION: WLI
FULL NAME: WARNING LABEL INITIALIZATION	
CONTROL CODE: S PSOX=1050, PSOY=55	
NUMBER: 19	CTRL CODE ABBREVIATION: RNI
FULL NAME: REFILL NARRATIVE INITIALIZATION	
CONTROL CODE: S PSOY=2860, PSOFONT="F10", PSOX=0, PSOYI=50, PSOYM=3950	
NUMBER: 20	CTRL CODE ABBREVIATION: CNI
FULL NAME: COPAY NARRATIVE INITIALIZATION	
CONTROL CODE: S PSOY=2860, PSOX=1210, PSOYM=3950, PSOFONT="F10", PSOYI=50	
NUMBER: 21	CTRL CODE ABBREVIATION: PII
FULL NAME: PATIENT INSTRUCTION INITIALIZATION	
CONTROL CODE: S PSOX=1210, PSOY=760, PSOFONT="F12"	
NUMBER: 22	CTRL CODE ABBREVIATION: RPI
FULL NAME: REFILL PRINT INITIALIZATION	
CONTROL CODE: S	
PSOFONT="F10", PSOBYI=65, PSOTYI=50, PSOLX=0, PSORX=1210, PSOY=1350	
, PSOYM=3650, PSOXI=90, PSOSYI=135	
NUMBER: 23	CTRL CODE ABBREVIATION: BLH
FULL NAME: BOTTLE LABEL HEADER INITIALIZATION	
CONTROL CODE: S PSOX=100, PSOY=50, PSOYI=30, PSOFONT="F9"	
NUMBER: 24	CTRL CODE ABBREVIATION: BLB
FULL NAME: BOTTLE LABEL BODY INITIALIZATION	
CONTROL CODE: S	
PSOX=0, PSODX=275, PSOY=150, PSOYI=40, PSOYM=379, PSOFONT="F10"	
NUMBER: 25	CTRL CODE ABBREVIATION: BLF
FULL NAME: BOTTLE LABEL FOOTER INITIALIZATION	
CONTROL CODE: S	
PSODY=460, PSOX=0, PSOCX=280, PSOQY=550, PSOTY=610, PSOFONT="F10", P	
SOQFONT="F8", PSODFONT="F9", PSOTFONT="F10"	
NUMBER: 26	CTRL CODE ABBREVIATION: RT
FULL NAME: ROTATE TEXT	CONTROL CODE: W *27,"&a90P"
NUMBER: 27	CTRL CODE ABBREVIATION: NR
FULL NAME: NORMAL ROTATION	CONTROL CODE: W *27,"&a0P"
NUMBER: 28	CTRL CODE ABBREVIATION: PFDI
FULL NAME: PHARMACY FILL DOCUMENT INITIALIZATION	
CONTROL CODE: S PSOFONT="F10", PSOX=0, PSOY=700, PSOYI=40, PSOYM=969	
NUMBER: 29	CTRL CODE ABBREVIATION: PFDQ
FULL NAME: PHARMACY FILL DOCUMENT QUANTITY	
CONTROL CODE: S	
PSOX=0, PSOCX=200, PSOY=970, PSOYI=50, PSOQFONT="F8", PSOFONT="F10"	
NUMBER: 30	CTRL CODE ABBREVIATION: PFDW
FULL NAME: PHARMACY FILL DOCUMENT WARNING	
CONTROL CODE: S PSOY=1270, PSOX=600, PSOYI=30, PSOFONT="F8", PSOYM=1329	
NUMBER: 31	CTRL CODE ABBREVIATION: AWI
FULL NAME: ALLERGY WARNING INITIALIZATION	
CONTROL CODE: S PSOX=0, PSOY=1400, PSOYI=50, PSOFONT="F10"	
NUMBER: 32	CTRL CODE ABBREVIATION: F6
FULL NAME: SIX POINT FONT - NO BOLD	
CONTROL CODE: W *27,"(10U",*27,"(s1p6v0s0b16602X"	
NUMBER: 33	CTRL CODE ABBREVIATION: EBT
FULL NAME: END OF BARCODE TEXT	
CONTROL CODE: W *27,"(8U",*27,"(s1p8v0s0b16602T", !	

NUMBER: 34	CTRL CODE ABBREVIATION: BLBC
FULL NAME: BOTTLE LABEL BARCODE	
CONTROL CODE: W	
*27,"(s1p10.4v4,12b4,12s24670T",*27,"&a90P",*27,"*p3650x1000Y"	
NUMBER: 35	CTRL CODE ABBREVIATION: PFDT
FULL NAME: PHARMACY FILL DOCUMENT TRAILER	
CONTROL CODE: S	
PSOY=1015, PSOYI=45, PSOX=0, PSOFONT="F10", PSOBYI=50, PSOTFONT="F9	
", PSOBY=1280	
NUMBER: 36	CTRL CODE ABBREVIATION: EBLBC
FULL NAME: END OF BOTTLE LABEL BARCODE	
CONTROL CODE: W *27,"(10U",*27,"(s1p10v0s0b16602T",*27,"&a0P",!	
NUMBER: 37	CTRL CODE ABBREVIATION: SBT
FULL NAME: START OF BARCODE TEXT	
CONTROL CODE: S PSOY=PSOY+PSOYI W	
*27,"*p",PSOX,"x",PSOY,"Y",*27,"(s1p14.4v6,1	
8b6,18s24670T"	
NUMBER: 38	CTRL CODE ABBREVIATION: PFI
FULL NAME: PATIENT FILL INITIALIZATION	
CONTROL CODE: S	
PSOFONT="F10", PSOX=1230, PSOY=700, PSOYI=50, PSOHFONT="F12", PSOBY	
I=100	
NUMBER: 12172	CTRL CODE ABBREVIATION: LL
FULL NAME: LASER LABEL	CONTROL CODE: Q

### 18.3.3. VMS Print Queue Setup

If you use VMS print queues, an additional setup is necessary. You must define a form specifically for laser labels.

**NOTE:** The form must have a length of 255 and a width of 512.

The following is an example form:

Form name	Number	Description
-----	-----	-----
LABELFORM /LENGTH=255 /MARGIN=(BOTTOM=6)	2	LASER LABEL /STOCK=LABELFORM /TRUNCATE /WIDTH=512

#### 18.3.4. Control Codes

To modify the control codes to work appropriately with your device, use the following information.

Control Codes in use by Laser Labels:

ACI = ADDRESS CHANGE INITIALIZATION  
ALI = ALLERGY SECTION INITIALIZATION  
AWI = ALLERGY WARNING INITIALIZATION  
BLB = BOTTLE LABEL BODY INITIALIZATION  
BLBC = BOTTLE LABEL BARCODE  
BLF = BOTTLE LABEL FOOTER INITIALIZATION  
BLH = BOTTLE LABEL HEADER INITIALIZATION  
CDII = CRITICAL DRUG INTERACTION INITIALIZATION  
CNI = COPAY NARRATIVE INITIALIZATION  
EBLBC = END OF BOTTLE LABEL BARCODE  
EBT = END OF BARCODE TEXT  
F10 = TEN POINT FONT - NO BOLD  
F10B = TEN POINT FONT, BOLDED  
F12 = TWELVE POINT FONT - NO BOLD  
F12B = 12 POINT FONT BOLDED  
F6 = SIX POINT FONT - NO BOLD  
F8 = EIGHT POINT FONT - NO BOLD  
F9 = NINE POINT FONT - NO BOLD  
FDU = FONT DISABLE UNDERLINE  
FWU = FONT WITH UNDERLINE  
LL = LASER LABEL  
LLI = LASER LABEL INIT  
MLI = MAILING LABEL INITIALIZATION  
NR = NORMAL ROTATION  
PFDI = PHARMACY FILL DOCUMENT INITIALIZATION  
PFDQ = PHARMACY FILL DOCUMENT QUANTITY  
PFDT = PHARMACY FILL DOCUMENT TRAILER  
PFDW = PHARMACY FILL DOCUMENT WARNING  
PFI = PATIENT FILL INITIALIZATION  
PII = PATIENT INSTRUCTION INITIALIZATION  
PMII = PMI SECTION INITIALIZATION  
RMI = RETURN MAIL INITIALIZATION  
RNI = REFILL NARRATIVE INITIALIZATION  
RPI = REFILL PRINT INITIALIZATION  
RT = ROTATE TEXT  
SBT = START OF BARCODE TEXT  
SPI = SUSPENSE PRINT INITIALIZATION  
ST = START OF TEXT  
WLI = WARNING LABEL INITIALIZATION

In addition to escape sequences to control printer output, variables are defined in the control codes that allow the routine to correctly position text and use the appropriate font.

The following is the description of the variables and their usage:

PSOX – X coordinate  
 PSOY – Y coordinate  
 PSOYI – Y increment, used to determine spacing between lines  
 PSOFONT – font size to be used. The font used is Arial.  
 PSOYM – bottom margin for this section

Some sections contain variables specific only to that section. They are as follows:

Control Code Variable

MLI	PSOHFONT – font for header lines
ACI	PSOHFONT – font for header lines
RMI	PSORYI – Y coordinate for return mail name PSOHYI – Y coordinate for header line PSOTFONT – font for trailer line PSOTY – Y coordinate for trailer line
SPI	PSOCX – X coordinate for date
RPI	PSOBYI – Y increment for barcode PSOTYI – Y increment for trailer information PSOLX – X coordinate for left side of page PSORX – X coordinate for right side of page PSOSYI – Y increment for signature line PSOXI – X increment
BLB	PSOBX – X coordinate for barcode
BLF	PSODY – Y coordinate for discard line PSOCX – X coordinate for continued line PSOQY – Y coordinate for quantity information PSOTY – Y coordinate for trailer information PSOQFONT – font for quantity PSODFONT – font for discard line PSOTFONT – font for trailer information
PFQD	PSOCX – X coordinate for continued line PSOQFONT – font for quantity
PFDT	PSOBYI – Y increment for barcode PSOTFONT – font for trailer information PSOBY – Y coordinate for barcode
PFI	PSOHFONT – font for header PSOBYI – Y increment for barcode

Barcodes

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# **Index**

## **A**

Archiving and Purgung, 17

## **B**

Barcodes and Label Printer Support, 45  
Barcodes on Dot Matrix Printers, 45

## **C**

Callable Routines, 19  
Communication Protocol, 53  
Control Code Entries, Samples, 48a  
Control Codes in use by Laser Labels, 48d  
Create LAT Port, 26  
Create VISTA Device File Entries, 27  
Create VMS Terminal Characteristics/Protection, 26

## **D**

Data Base Integration Agreements, 29  
Data South 220, 47  
Dot Matrix Labels, 46  
Dot Matrix Printers and Barcodes, 45

## **E**

Electronic Signatures, 35  
Exported Options, 15  
External Interfaces, 19  
External Relations, 29

## **F**

Field Rules, 52  
File Security, 37  
Files, 11

## **G**

General Information, 51  
Genicom 4440, 47  
Genicom 4490, 47

## **H**

Hardware Setup, Laser Label Printers, 48  
HL7 Messaging with an External System, 63  
HL7 Order Message Segment Definition Table, 64

**I**

Implementation and Maintenance, 5  
Interfacing, 35  
Internal Relations, 31  
Introduction, 1

**J**

Journaling Globals, 45

**L**

Label Printer Support, 45  
Laser Label Control Codes, 48d  
Laser Label Printers, 48  
Laser Label Printers, Hardware Setup, 48

**M**

M Audiofax (Telephone Refill Requests), 7  
Mail Group Setup for the HL7 External Interface, 8, 35  
Menu Assignments, 15, 35  
Menu Diagrams, 39  
Message Rules, 51  
MT290, 47  
MT-661, 47

**N**

New Label Stock (Version 6.0 and Later Versions), 46

**O**

Online Documentation, 3  
Options to be Deleted during Installation, 6  
Order Messaging Exceptions, 68  
Orientation, 3  
OTC 560, 47  
Outpatient Pharmacy Files, 11  
Outpatient Pharmacy HL7 Interface Specification, 51  
Outpatient Pharmacy Manager, 39  
Outpatient Pharmacy V. 7.0 Menu Diagrams, 39

**P**

Package Security, 15  
Package-Wide Variables, 31  
Pharmacist, 43  
Pharmacy Technician, 44  
Print Queue Setup, VMS, 48c  
Processing Rules, 53

**Q**

Queue Background Jobs, 9

## **R**

Related Manuals, 3  
Resource Requirements, 5  
Routine List, 13  
Routine Mapping, 45  
Routines to be Deleted during Installation, 7

## **S**

Security Keys, 15, 36  
Segment Rules, 52  
Set Up the DECserver Port, 26  
Setting up the Archive Device, 17  
Setting up the Bingo Board Device, 8  
Setting Up the Interface, 19  
Shutting Down the Interface, 21  
Software Product Security, 35  
Specific Transaction, 54  
Steps for Setup/Shutdown of the External Interface, 19

## **T**

Telephone Refill Requests, 7  
Templates, 33  
Templates to be Deleted during Installation, 7  
Transaction Specifications, 53

## **U**

Username Creation, 25  
Using the Maintenance Menu, 8

## **V**

VAX System, 24  
View of Queue Background Jobs Screen, 9  
VMS Print Queue Setup, 48c

Index

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